

APPENDIX A

Copy Phase

// bytes_read keeps track of how many FROM space bytes have been read into the cache
// since the previous TO space streaming session
Initialize FROM space data counter, **bytes_read** to 0
Initialize an empty ancillary data structure **D** for holding tuples.

```
FOR EACH live object X whose address is in the mark stack DO
{
    FOR EACH non-null child reference R in the object X DO
    {
        Examine header of child to figure out new TO address, R'.
        In X, change R to R'
    }
    Locate the TO address X' of object X from the header of the object.
    Insert the association of X and X' as a tuple – (X, X') in data structure D

    Increment, bytes_read by the size of object X.
    IF (bytes_read GREATER_THAN_OR_EQUAL_TO CACHE_SIZE)
    {
        FOR EACH object tuple (Z, Z') contained in data structure D
        {
            Copy using non-temporal streaming stores all the bits of object Z
            in FROM space to address Z' in TO space.
        }
        Flush/empty the data structure D.
        Reset the bytes_read counter to 0.
    }
}
```